

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

Date of mailing (day/month/year)
31 August 2006 (31.08.2006)

Applicant's or agent's file reference
PT03074-PCT

International application No.
PCT/JP2004/018838

Applicant
Vodafone K.K. et al

To:

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**IMPORTANT NOTIFICATION****1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PT03074-PCT	FOR FURTHER ACTION		See item 4 below
International application No. PCT/JP2004/018838	International filing date (<i>day/month/year</i>) 16 December 2004 (16.12.2004)	Priority date (<i>day/month/year</i>) 15 January 2004 (15.01.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant Vodafone K.K.			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I Basis of the report
<input type="checkbox"/>	Box No. II Priority
<input type="checkbox"/>	Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI Certain documents cited
<input type="checkbox"/>	Box No. VII Certain defects in the international application
<input type="checkbox"/>	Box No. VIII Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

Date of issuance of this report 22 August 2006 (22.08.2006)	
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Yoshiko Kuwahara e-mail: pt07@wipo.int

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT
TRANSLATION

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

		Date of mailing (day/month/year)
Applicant's or agent's file reference PT03074-PCT		FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/JP2004/018838	International filing date (day/month/year) 16.12.2004	Priority date (day/month/year) 15.01.2004
International Patent Classification (IPC) or both national classification and IPC		
Applicant Vodafone K.K.		

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/018838

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 a sequence listing
 table(s) related to the sequence listing
 - b. format of material
 in written format
 in computer readable form
 - c. time of filing/furnishing
 contained in the international application as filed.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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1. Statement

Novelty (N)	Claims <u>4, 6-10</u>	YES
	Claims <u>1-3, 5, 11-14</u>	NO
Inventive step (IS)	Claims _____	YES
	Claims <u>1-14</u>	NO
Industrial applicability (IA)	Claims <u>1-14</u>	YES
	Claims _____	NO

2. Citations and explanations:

Document 1: JP 2003-535405 A (VKB Inc.), 25 November 2003, Full text, all drawings

Claims 1 through 3, 5 and 11 through 14

The inventions of claims 1 through 3, 5, and 11 through 14 do not appear to possess novelty or involve an inventive step based on document 1 cited in the ISR.

Document 1, Par. Nos. 0068-0069, discloses conducting a key input operation with a "mobile telephone (200)" comprising a "projector (202)" capable of projecting a "keyboard image (204)" on a "non-movable surface (206)" such the top of a desk, "sensor (208)" for detecting the operation of an indicator of a user relating to a position on the image, and "an infrared light-emitting body (212)". It is also disclosed that at least one of a CCD and CMOS camera, etc. carried on a mobile phone is employed for the sensor.

Furthermore, document 1, Par. No. 0049 through 0053 discloses that the arrangement, size, and shape of "keys (92)" can be changed by the "word processor (86)" recognizing a desired word based on the user's input and generating the other "key pattern (88)" in "a laser unit (68)" and by the user typing a command. Therefore, it is obvious to a person skilled in the art that the device described in document 1 also has recognition functions of a plurality of types.

Furthermore, document 1, Par. Nos. 0080 through 0082, discloses that the projector comprises "a solid point light source (322)", "a dynamic mask (336)" that is a space light modulator or the like serving to perform light modulation, "an image generator (338)" for transmitting a modulated input to the dynamic mask, "a projection lens (340)", and "a mirror (342)".

Document 2: JP 06-083512 A (International Business Machines Corporation), 25 March 1994, Full text, all drawings

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INTERNATIONAL SEARCHING AUTHORITY

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: V_2

Claims 4, 6, 7, and 8

The inventions of claims 4, 6, 7, and 8 do not appear to involve an inventive step based on document 1 and document 2 cited in the ISR.

Document 2 discloses an input device comprising a virtual keyboard that is an optical user interface, wherein the user interface can be used for multitasking, and a keyboard mode such as a typewriter, a mouse, or a piano can be switched according to the input from the user.

On the other hand, document 1, Par. No. 0041-0043, 0066-0067, and 0080-0082, discloses that an image of a keyboard comprising various "input zones (19)" can be supplied by changing the modulation of dynamic mask. Therefore, employing a technology enabling the execution of multitasking with a virtual keyboard, which is described in document 2, in the mobile phone described in document 1, could have easily been conceived of by a person skilled in the art.

Document 3: JP 2002-244803 A (Nokia Corp.), 30 August 2002, Full text, all drawings

Document 4: JP 2002-116878 A (Seiko Epson Corp.), 19 April 2002, Par. Nos. 0032 - 0099, Par. Nos. 0123-0128, Figs. 1-6 .

Claims 9 and 10

The inventions of claims 9 and 10 do not appear to involve an inventive step based on document 1, document 3, and document 4 cited in the ISR.

Document 3 discloses an electronic device in which a virtual keyboard is drawn with "laser beams (12d), (12e), (12f)" and functions are realized by detecting the key pushing action. Furthermore, document 3, Par. Nos. 0026 to 0028, discloses changing the output of a laser beam with respect to a region where a finger was detected on a virtual keyboard.

Furthermore, document 4, Par. No. 0032 to 0099 discloses an image generation system comprising "a projector (20)", "a CCD camera (40)", and "a laser pointer (100)", wherein the designated position on "an image display region (12)" is detected from the image of the CCD camera and the image of "an icon (300)" obtained by performing an operation such as click operation is changed.

Each of the mobile phone described in document 1, the input device described in document 3, and the image generation system described in document 4 comprises an optical virtual input unit and they all belong to closely linked fields of technology. Therefore, employing the technology of changing the image portion that is the operation object, as described in document 3 and document 4, in the mobile phone described in document 1 could have easily been conceived of by a person skilled in the art.